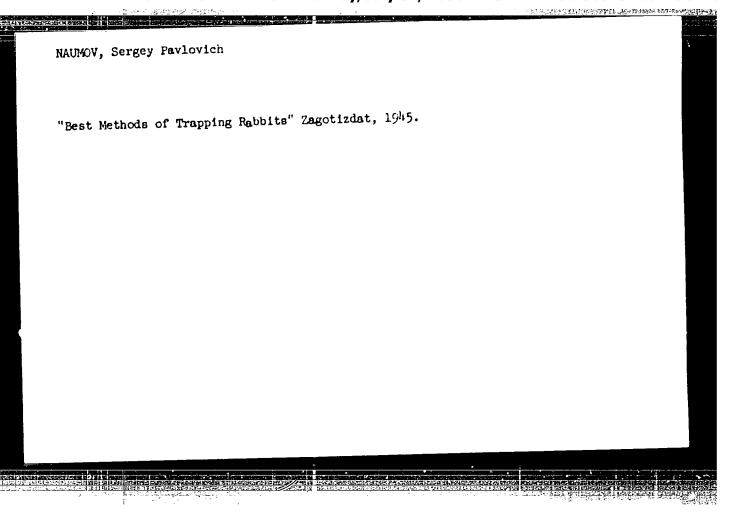
NAUMOV, Sergey Pavlovich

"Material on the Fixed Distribution of Rabbits (Lepus fimidus L)" Uchenye zapiski
Mosk. gos. ped. In-ta im V. I. Lenina, Vol. 24, No.2, 1941.

NAUMOV, Sergey Pavlovich

"Material on the Dynamics of Parasite Fauna for Mammalia" Zool. Zhurn. Vol. XXIII,
No. 4, 1944.



"APPROVED FOR RELEASE: Monday, July 31, 2000

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NAUMOV, Sergey Pavlovich

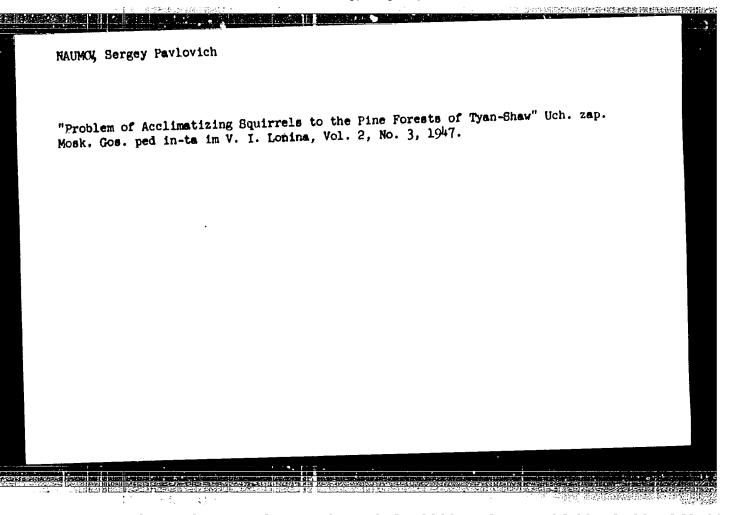
"Material on the Geographic and Fixed Distribution of Marmots in the Central Tyan-Shan" Byull. MOIP, No. 5-6, 1945.

"APPROVED FOR RELEASE: Monday, July 31, 2000

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NAUMOV, Sergey Pavlovich

"Game Fauna of West Siberian Forests and Perspectives for Its Economic Uitlization"
Tr. Konferents. AN SSSR po izuch. proizb. sil lrkutskdy Obl. 1947.



NAUMOV, Sergey Pavlovich

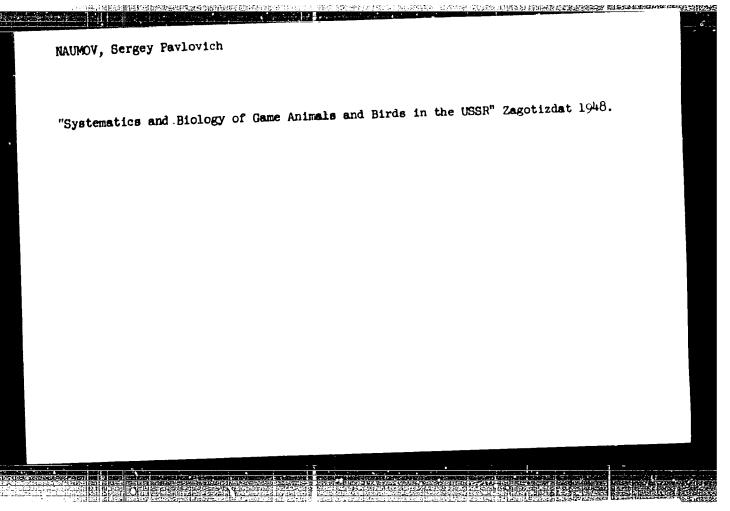
"Ecology of the Rabbit (Theoretical Fundamentias for Forecasting population)"

VNITO less, 1948.

NAUMOV, Sergey Pavlovich

"Lumber Management Dictionary and Manual (number of articles on Zoology)" VNITO lesa, 1948.

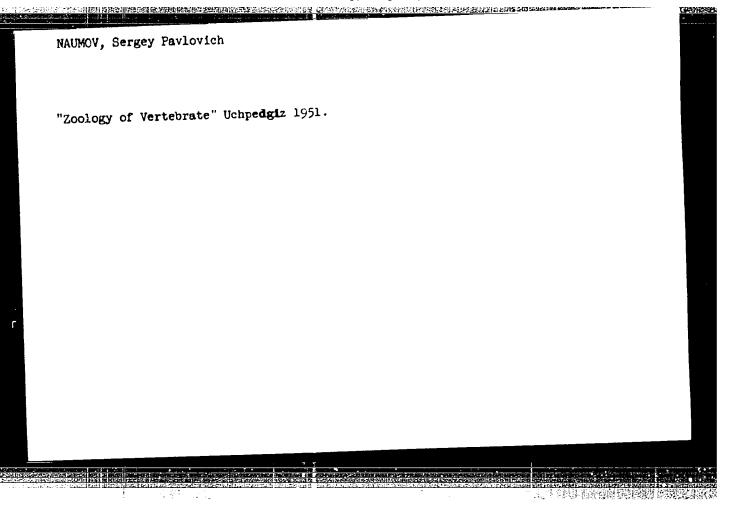
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NAUMOV, Sergey Pavlovich

"Reconstruction of the Fauna of Game Animals in the USSR During the Stalin Five Year Plan" Byull. MOIP Vol. 4, No. 6, 1949.

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NAUMOV, Sergey Pavlovich

"The Hare" Article for 2nd Ed. of Lumber Management Handbook, 1952.

NAUMOV, Sergey Pavlovich "Zoology of Mountain RAnges" Radyans'ka shkola (Revised and supplemented edition of a text for pedagogical Higher schools)1953.

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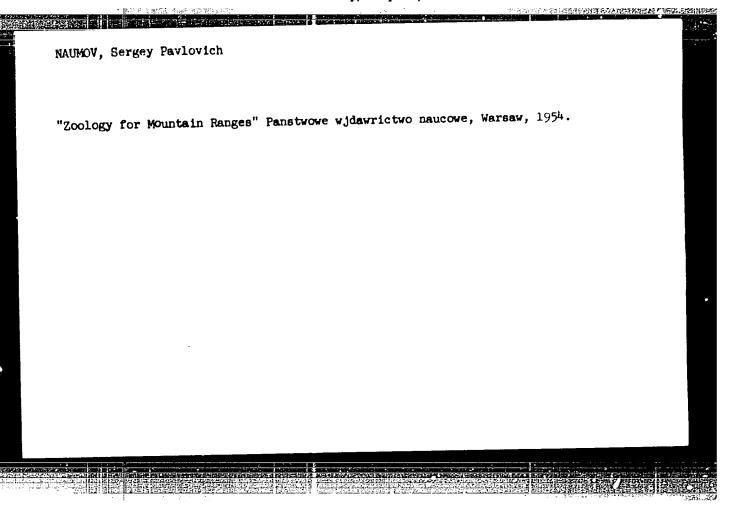
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NAUMOV, Sergey Pavlovich

"Reasons for and Regularities in the Dynamics of Rabbit Population in Yakutsk"
Thesis Report 3rd Ecological Conference, Vol. IV, 1954.

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NAUMOV, Sergey Pavlovich

"Course in Zoology. (for Georgraphy Faculties)" Part II, Uchpedgiz, 1955.

BANNIKOV, A.G., prof., doktor biol. nauk; NAUNOV, S.P., prof., doktor biol. nauk; POMOMAREVA, A.A., tekhn. red.

[Frograms of pedagogical institutes; soogrography for geography faculties] Programmy pedagogicheskikh institutov; geografica shivotnyth dlia geograficheskikh fakul tetov. Moskva, Gos. uchebno-pedagog. isd-vo M-va prosv. RSFSR, 1955. 13 p. (MIRA 11:9)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye vysshikh i erednikh pedagogicheskikh uchebnykh savedeniy. (Zoogeography-Study and teaching)

HAUNOV, S.P., prof.; GILIAEOV, M.S., prof.; BAHNIKOV, A.G., prof.; BOIOHAD, V.B., red.; MIRGHENDA, M.I., tekin, red.

[Programs of pedagogical institutes; soology for natural science faculties] Programy pedagogicheskith institutov; soologis dia facultetov e.testvosmania. [Moskva] Uchepedgis, 1955. 32 p. (MIRA 11:9)

1. Bassia (1917- R.S.F.S.R.) Glavnoye upravleniye vyeskhith i prednikh pedagogicheskith uchabnyth savedeniy.

(Zoology—Study and teaching)

ZEMENUCH, Lev Alekeandrevich; MAUMOV, Sergey Pavlevich; MEKHLYUDOVA, A.S., redakter; MAHOVA, H.B., tekhnichesty Tedakter.

[Brief ceurse in seelegy; manual for the geography departments of pedagogical institutes] Eratkii kure seelegii; uchebase pesabis dlia geografichestikh faulitatev pedagogichestikh institutev. Meskva, geografichestikh faulitatev pedagogichestikh institutev. Meskva, dee. uchebas-padagog. isd-ve Ministerstva preeveshchemita REFER, 19:5.
427 p. (Keelegy)

(Keelegy)

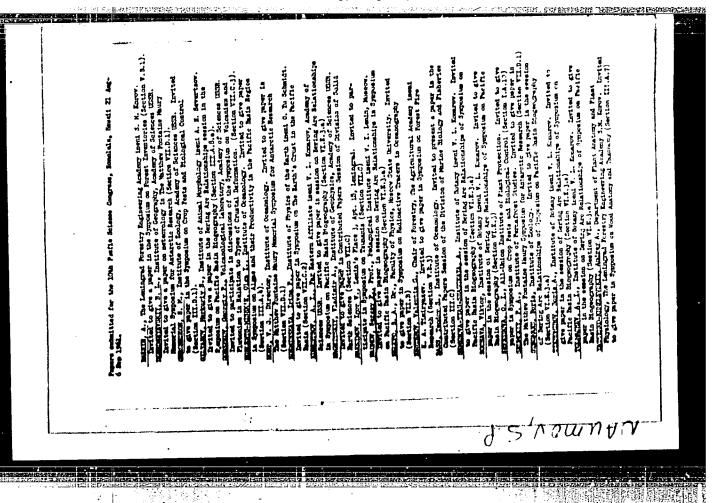
LATHOV, Mikolay Petrovich; MAUMOV, Sergey Pavlovich; KOLOSOV, A.M., prof., red.; BILBERO, L.S., red.ind-va; FONICHEV, P.M., tekim.red.

[Biology of game enimals and birds in the U.S.S.R.] Biologia promyslovykh sverei i ptits SSSR. Pod obshchei red. A.M.Kolosova. Moskva, Ind-vo Tentrosoluza, 1960. 236 p. (MIRA 14:2)

(Game and game birds)

"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R001136210



APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R0011362100

KOLOSOV, A.M.; LAVROV, N.P.; HARMOV, S.P.; DUKAL'SKAYA, K.M., red.;

ROZAROVA, G.K., red. ind-va; KURASHOVA, V.A., tekhn. red.

[Biology of commercial animals in the U.S.S.R.] Biologiia oromyslovykh sverei SSSR. Keekva, Gos. ind-vo "Vyushaia shkola,"

1961. 379 p. (Game and game birds)

(Game and game birds)

NAUMOV, S.P.; LABUTIN, Yu.V. Materials on the bird fauna of the Verkhoyansk folded region. Report No.1: Composition of the bird fauma and some characteristics of species distribution in the western part of the Verkhoyansk area. Biul.
MOIP. Otd. biol.66 no.6:116-125 N-D '61. (MIRA 14:12)
(VEREHOYANSK REGION_BIRDS)

KOLOSOV, Aleksey Mikhaylovich, prof.; LAVROV, Nikolay Petrovich, prof.; NAUNOV, Sergey Pavlovich, prof.; FETROVSKAYA, L.P., red.

[Biology of commercial animals of the U.S.S.R.] Biologita promyslovykh zverei SSSR. Perer. i znachitelino dop. izd. Moskva, Vysshaia shkola, 1965. 508 p. (MIRA 18:6)

NOVIKOV, Pavel Aleksandrovich, prof.; NAUMOV, Sergey Pavlovich, prof.; PETROVSKAYA, L.P., red.

[Zoology] Zoologiia. Moskva, Vysshaia shkola, 1965. 458 p. (MIRA 18:7)

NAUFOV, Sergey Pavlovich, prof.; KHUNTSKARIYA, Ye.N., red.

[Zoology of the writebrates] Zoologila pozvonochnykh.

Moskwa, Prosveshchenie, 1965. 462 p. (MIRA 18:12)

NAIMON Server Savvich; SERENKO, A.S., otv.red. [deceased]; KHAZAN, G.A., otv.red.; SINYAVSKAYA, Ye.K., red.izd-va; ANDREYEV, S.P., tekhn.red.

[Improvement of sanitary conditions at work, and safety engineering in the by-product coke industry] Osdorovlenie uslovii truda i tekhnika bezopasnosti v koksokhimicheskom proisvodstve. Ehar*kov, Gos.nauchno-tekhn.isd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959. 359 p. (MIRA 12:4)

(Coke industry--Safety measures)

Card 1/2

SOV/51-4-6-11/24

Gerasimov, F.M., Tel'tevskiy, I.A., Naumov, S.S., Spizharskiy, S.M. AU THORS :

and Nesmelov, S.V.

Diffraction Gratings from the State Optical Institute (Difraktsionnyye TITLE:

reshetki Gosudarstvennogo Opticheskogo Instituta)

Optika i Spektroskopiya, 1958, Vol IV, Nr 6, pp 779-790 (USSR) PERIODICAL:

The present paper describes briefly the technique of preparation of ABSTRACT: optical diffraction gratings at the State Optical Institute imeni S.I. Vavilov and discusses in detail the optical characteristics of

these gratings in the ltraviolet, visible and near infrared spectral regions. The technique of preparation of gratings was fully described

in References 1, 2. Echelette gratings for the wavelengths 2.5-600 p were described in a paper presented at the Xth All-Union Conference on Spectroscopy (Ref 3). The gratings are prepared by means of a screw-motion ruling machine (Fig 1) which can produce gratings of 150 x 150 mm area with 1200, 600, 300 and 200 lines/mm. This machine does not differ from the majority of machines decribed in literature. Figs 2 and 3 show certain details of the carriage of

the ruling machine at the Institute. A typical profile of a diffraction

grating is shown in Fig 4. The lower part of the figure shows

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SOV/51-4-6-11/24

Diffraction Gratings from the State Optical Institute

an electron microscope image of a grating with 1200 lines/mm. The optical characteristics of the gratings produced are discussed as well as the sources of certain errors. The resolving power of better gratings reaches 600 000. The relative intensity of Rowland's "ghosts" in the first order of gratings with 600 lines/mm is about 0.1%, and in better gratings it may be only 0.01%. The gratings of the State Optical Institute produce a high concentration of light in a given direction. Thus gratings with a step-like profile, with a slope of the working edge of 5-10°, concentrate in the maximum up to 85% of the total reflected light, which is near the theoretical limit. A characteristic change in the polarization properties of gratings was observed in the region of the maximum light concentration. On the short-wavelength side of the maximum the component with electric vector vibrations parallel to the grating lines is the more intense, and on the long-wavelength side of the maximum the component with electric vector vibrations perpendicular to the graing lines is stronger (Fig 10). There are 10 figures and 17 references, 8 of which are Soviet, 4 English, 3 American, 1 German and 1 translation of a Western work into Russian.

Card 2/2

ASSOCIATION:

Goeudarstvennyy Opticheskiy Institut im. S.I. Vavilova (State

Optical Institute imeni S.I. Vavilov)

SUBMITTED:

January 17, 1958

SOV/51-5-6-7/19

LUTHORS:

Gerasimov, F.M. and Haumov, S.S.

TITLE:

An interferometer with a Concave Diffraction Grating (Interferometr

s vognutoy difraktsionnoy reshetkoy)

PERIODICAL:

Optika i Spektroskopiya, 1958, Vol 5, Nr 6, pp 682-685 (USSR)

ABSTRACT:

Light beams diffracted by a grating may interfere with one another provided they are coherent. The authors observed interference between beams diffracted by a plane or a concave grating. The apparatus used in experiments with plane gratings is shown schematically in Fig 1. Two diffracted beams (1 and 2 in Fig 1) were reversed by plane mirrors and after second diffraction at the grating they were focused by an objective, as shown in Fig 1. When the mirrors are placed at certain angles interference bands are observed at the focus. The optical system of an interferometer with a concave grating is shown in Fig 2. A light beam from a lamp 1 passes through an aperture 2 and after reflection from a half-silvered glass plate 3 fails on a concave Diffracted beams of the first order are reversed by plane mirrors 5 and after a second refraction converge at a point 6 at which interference may be observed visually. The system can be used for observation of interference in monochromatic light only. The concave

card 1/2

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sov/51-5-6-7/19

An Interferometer with a Concave Diffraction Grating

grating usedhad a radius of curvature of 5 m and 200 lines/mm. The grating width was 50 mm and the length of ruled lines was 130 mm. Photographs of interference bands obtained with the concave grating are shown in Fig 3. The error along the field does not exceed 0.1 bands. A wide central spot was due to light reflected from a grating as if from a concave mirror (zero-order beam). The weaker spots are due to multiple diffraction of strong lines emitted by the source. This interferemeter was successfully applied to testing of reflecting surfaces and of plane diffraction gratings. There are 3 figures and 5 references, 4 of which are American and 1 Soviet.

SUBLITIBD: January 17, 1958

Card 2/2

\$/0051/64/016/001/0133/0138

ACCESSION NR: AP4011495

AUTHOR: Gerasimov, F.M.; Naumov, S.S.; Denisov, L.M.

TITLE: Diffraction gratings concentrating radiation in the vacuum ultraviolet and x-ray regions

SOURCE: Optika i spektroskopiya, v.16, no.1, 1964, 133-138

TOPIC TAGS: diffraction grating, concave diffraction grating, diffraction grating ruling, ultraviolet spectroscopy, x-ray spectroscopy

ABSTRACT: The characteristics of concave diffraction gratings with step profile rulings are discussed. Conventional gratings commonly employed in spectroscopy, particularly in the wavelength region below 1000 Å, are characterized by V shaped lines separated by flats (a in the figure - see Enclosure). Such gratings in the short wavelength region are characterized by low efficiency as regards concentration of light: about 20% in one of the first orders. In practice, owing to unavoidable irregularities, the actual profile has the appearance shown in b, so that the efficiency is further reduced. In the present paper there are discussed concave gratings with a line profile of the type shown in c. Theoretically such gratings should be

Card 1/5

ACC. NR: AP4011495

517

more efficient. The angle of inclination Comust be of the order 30. Gratings of the type have been ruled on aluminum and have proved capable of concentrating up to 85% of the reflected radiation in one order. Hitherto, such gratings have not been ruled on glass owing to the mechanical difficulties involved. These difficulties stem from the fact that the grooves must be very shallow in view of the small value of the angle C and the fact that the angle C must be maintained constant over the curved surface of the gratings. The authors have ruled and tested concave gratings of this step type on aluminum coated on glass (1200 lines/mm) and on F1 glass with 300, 600 and 1200 lines/mm and angles C from 30' to 4°. A special set-up was developed for visual determination of the location of maximum concentration. The experimental gratings were tested in a number of short wavelength spectrographs and yielded satisfactory results, i.e., resulted in a significant reduction of the exposure time. The results of measurement of the efficiency of the gratings in the 1100 to 2500 A region are described clsewhere (S.A.Kulikov and M.G.Mikitin, Opt.mekhanich.promyshlennost!,12,2,1962). A number of the experimental gratings are now being tested further in oblique incidence spectrographs intended for the 100 to 1000 R region. Orig.art.has: 1 formula and 4 figures.

Card 2/8

Country: USBR

Soil Science. Cultivation. L provement Category:

Erosion.

Abs Jour: RZhBiol., No 14, 1958, No 63143

Author : Naunoy S.V.

Inst

: Classification of the Forms of Erosion Formations. Title

Oric Pub: Pochvovedeniye 1956, No 9, 71-82

Abstract: The author distinguishes between cresson form-

tion types of ancient and present-day origin. To the first belong hollows, ravines, culches and valleys. Present-day erosion formations are divided into the forus produced by the processes of sheet and volume erosion. To the first belong surface and stricted run-off. To the second, bank

: 1/2 Card

J-75

U.S.S.R. / Human and Animal Physiology. Nervous System. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22618.

Author : Naumov, T. S.

: Not BIVOR. Inst : Changes of Electrical Activity of the Caudate Title

Nucleus Produced by Temporary Coupling Circuits

of Auditory and Motor Analyzers.

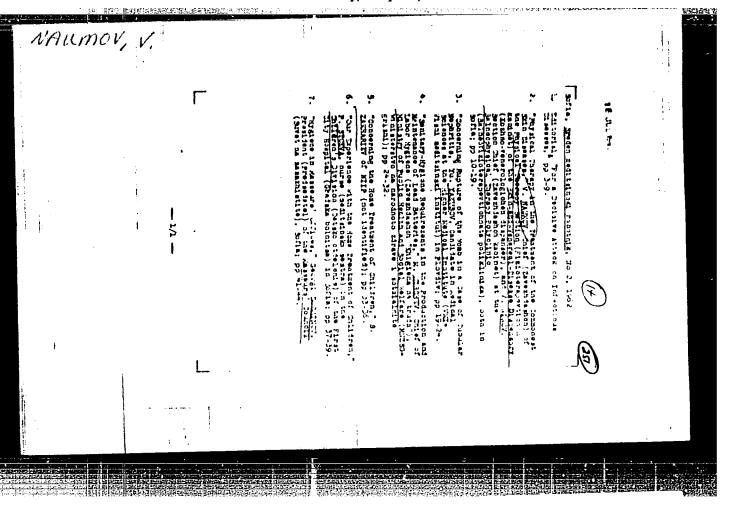
Orig Pub: Fiziol zh SSSR, 1957, 43, No 1, 14-21.

Abstract: Movements of the foot, occurring in response to sound, the dominating focus aroused by pol-arization of the cortex being located in the motor area, were associated with lowering of the amplitude and increase of the frequency of the potentials of the caudate nucleus. Similar changes in electrical activity occurred in response to sound also prior to polarization.

Card 1/3

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CIA-RDP86-00513R001136210



NAUMOV, V.; BEVZYUK, A.

First results. Fin. SSSR 37 no.ll:55-57 N°63. (MIRA 17:2)

1. Nachal'nik otdela kontrolya za finunsovo-khozyaystvennoy deyatel'nost'yu Predpriyatiy soveta narodnogo khozyaystva L'vovskogo promyshlennogo oblastnogo finansovogo otdela (for Naumov). 2. Starshiy ekonomisı otdela kontrolya za finansovo-khozyaystvennoy deyatel'nost'yu predpriyatiy soveta narodnogo khozyaystva L'vovskogo promyshlennogo oblastnogo finansovogo otdela (for Bevzyuk).

THE THREE SETS FOR CONTROL OF THE SETS OF STOIANOV, St., gl.lekar; NAUMOV, V. X-ray treatment of epithelioma at the enrichment of skin with oxygen. Dermato vener Sofia 2 no.3:103-107:63. 1. Iz Gradskiia kozhno-venerologichen ispanser - Sofiia (gl. lekar St.Stoianov). 2. Chlen na Redaktsionen suvet, "Dermatologiia i venerologiia (for Stoianov).

> CIA-RDP86-00513R001136210(APPROVED FOR RELEASE: Monday, July 31, 2000

BULGARIA

Kr. BALABANOV, Al. KONSTANTINOV and <u>Ves. NAUMOV</u>, Department of Dermatology of Medical College (Katedra po kozhni bolesti pri VMI) Head (rukovoditel na katedrafa) Prof Kr. BALABANOV, Sofia.

"Eccrine Spiradenoma."

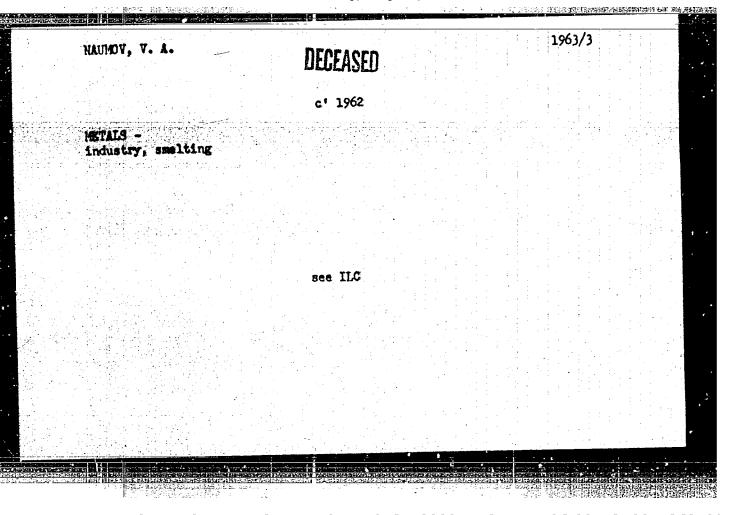
Sofia, Suvremenna Meditsina, Vol 14, No 4, 1963; pp 64-69.

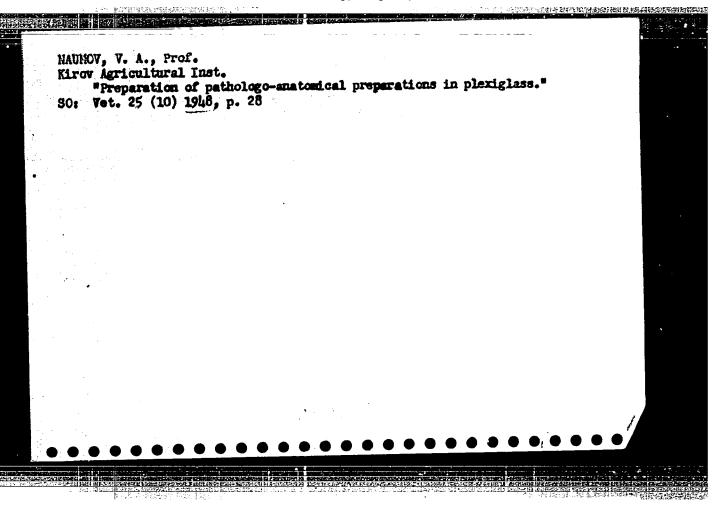
Abstract [English summary modified]: Description of first case reported in Bulgaria: small extremely painful tumor on shoulder of 28-year-old woodcutter. Very detailed histological data and discussion; speculation about origin from either eccrine or perhaps adjacent apocrine glands. Six photomicrographs, 10 Western references.

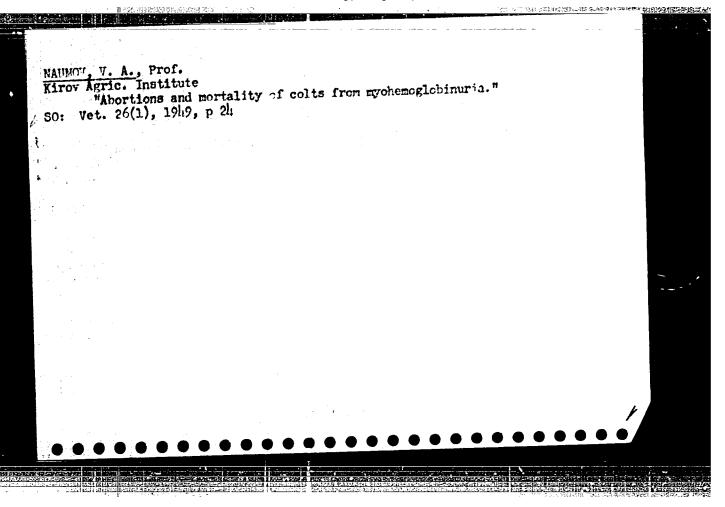
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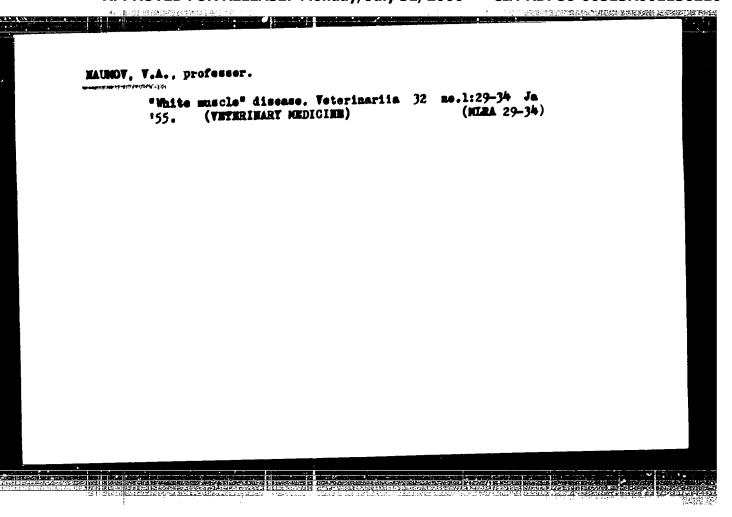
Use of liquid nitrogen in dermatology. Vest. derm. 1 ven. 38 no.3:47-50 Mr *64. (MIRA 18:4)

l. Scripskiy gorodskoy kozhno-venerologicheskiy dispanser (glavnyy vrach - doktor St. Stoyanov), Bolgariya.









MARKEV V. A. and TSFL.S.E. FV L. I. (Doctors of Noter har Selecter, professors, Kirov Arr cultural Instituta)

"Leukoplakia of the mucous membrane of the test distert of cous."

Veterinariya, Vol. 36, No. 12, December 1961, P. 16.

USER/Diseases of Farm Animals. Diseases of Unknown Etiology.

Abs Jour: Ref Zhur-Biol., No 12 , 1958, 54967.

Naumov, V. A. Palevich, G. A. Author

Inst

: To the Problem of Albinomyosis in Lambs and Calves. Title

Orig Pub: Cvtsevodstvo, 1957, No 7, 37-39.

Abstract: It was been observed that albinomyosis (AM) is a

specific disease of lambs, calves and piglets. Clinical characteristics and pathomorphological data are described. Some data are given on the differentiation between AM and poisonings. Penicillin is recommended for the treatment of animals

afflicted with AM in combination with the antidiplococcus serum and (K -topopherol which should be administered

3 times daily internally in a 3-4 ml dose. Prophylactic

: 1/2 Card

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"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R001136210

USSR/Diseases of Farm Animals. Diseases of Unknown Etiology. // //
Abs Jour: Ref Zhur-Biol., No 12, 1958, 54967.

measures consist in supplying pregnant ewes with sufficient amounts of microelements and vitamins and in following zoological and veterinary rules

of keeping young animals.

Card : 2/2

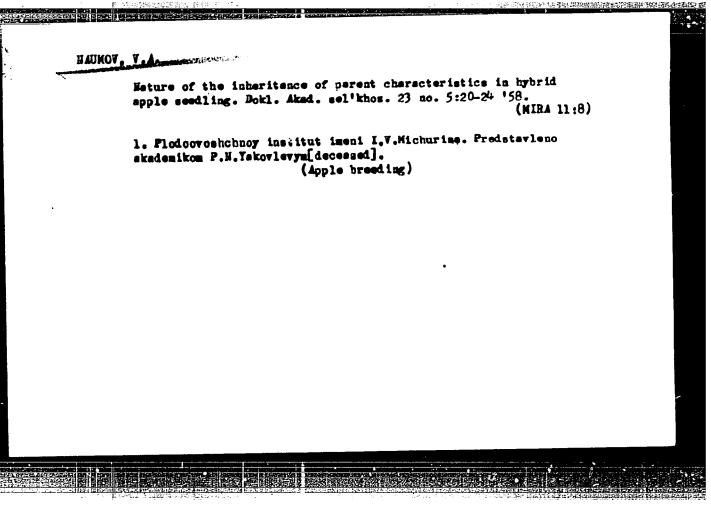
MAUNOV, V.A., prof.:Palevich, G.A., assistent

White miscular disease. Veterinariia 36 no.11:37-42 5 '59 (MIRA 13:3)

1. Eirovakiy sel'skokhosyaystvennyy institut.
(Veterinary medicine) (Muscular dystrophy)

· 5.2 美的复数经常用的**"经验验证的"的**是由于2006年 USSR / General Biology. Genetics. Plant Genetics. В Abs Jour : Ref Zhur - Biologiya, No 4, 1959, No. 14443 Author : Naumov, V. A. : All-Union Academy of Agricultural Sciences Inst imeni Lenin Title : The Hereditamy Characteristics of Parental Properties in Hybrid Seedlings of an Apple Tree Orig Pub : Dokl. VASKhNIL, 1958, No 5, 20-24 Abstract : The fission of hybrids, obtained by hybridization of Renet bergamot x Yellow Belle Fleur was studied by the author. The high morphological variety of the progeny was recorded, as well as good heredity of the Renet bergamot's indices. -- S. Ya. Krayevoy Card 1/1

Vegetative segregation in hybrid apple seedlings. Agrebiologica (NIRA 12:1) ne.6:66-74 F-D '58. 1.Fledeve-ovoshchnoy institut imeni I.V. Michurina, g. Michurinsk. (Apple breeding)



Hature of the inheritance of parent characteristics in hybrid apple seedling. Bokl. Akad. sel'khos. 2) no. 5:20-24 '58.

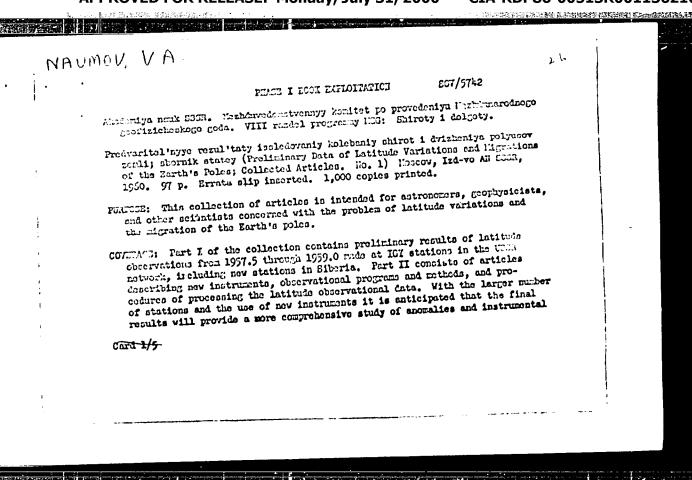
(NIRA 11:8)

1. Flodoovoshchnoy institut ineni I.V.Michurine. Predstavleno skadamikom P.N.Yakovlevym[decessed].

(Apple breeding)

NAUMOV, V. A.

Cand Biol Sci - (diss) "Vegetative fissure in hybrid apple slips." Voronezh, 1961. 18 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Voronezh State Univ); 200 copies; price not given; (KL, 7-61 sup, 228)



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:	Freliminary Data of Latitude Variations (Cont.) Out/5742 errors in latitude observations than has been ressible previously. somelities are contioned. English abstracts and references followed.	Ho per-	
	THE OF CONTENTS:	5	
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l ·	Feb year, A. H. Preliminary Results of Comparing Observation Zerotth Telescopes of the Kitab Latitude Station During the 1990.0	ona With Two Period 1957.5-	43	
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	Bakhrakh, N. H., and Kh. I. Potter. List of Stars on the F Flotographic Zenith Tube [FZT] Program	hlkovo	68	<u> </u>
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3/035/62/00/00/00/00/00/ A001/A101

3/220

AUTHOR:

Naumov. V. A.

TITLE:

Automation of observations with the Pulkovo photographic zenith

telescope

PERIODICAL:

Referativnyy zhurnal, Astronomiya 1 Geodeziya, no. 6, 1962, 19. abstract 6Al61 ("Izv. Gl. astron. observ. v Pulkove", 1961, v. 22,

no. 1, 98-112)

The author describes controlling devices, developed in the Main Astronomical Observatory, AS USSR, for the complete automation of observations with a photographic zenith telescope. Its automation system consists of the mechanism of automatic cycle for observation of one star by the four-exposure method and the programming mechanism. The automatic cycle mechanism controls the movements of the carriage with the photoplate, the functioning of the shutter time recording, turns of the objective (rotor) with the photoplate through 180° , and the operation of the printing chronograph. Symmetric distribution of exposure instants with respect to meridian is thereby ensured. Two step view finiers, set into motion by second pulses of the quartz clock, are used as

Card 1/2

CIA-RDP86-00513R001136210(APPROVED FOR RELEASE: Monday, July 31, 2000

\$/035/62/000/006/006/064 A001/A101

Automation of observations ...

controlling elements in the automatic cycle mechanism. A corresponding connection of these view finders forms a switch for 156 positions which ensures the working cycle in 156 sec. At prescribed instants and in a definite sequence, relay control circuits and servomechanism of the photographic zenith telescope are switched on by means of this switch. Exposure duration can be set at 10. 20 and 30 sec. Diagrams are presented which illustrate the functioning of the automatic cycle mechanism. Time is recorded by the optical and mechanical methods. The switching-on of this mechanism at determined time instants and selection of necessary exposure are accomplished by the programming mechanism which consists of the time counter, formed by two view finders, memory in the form of a commutation board, and star counter constructed on four view finders. The latter picks up necessary commutation out of the memory. The programming mechanism ensures automatic observation of no less than 100 stars. Diagrams of the programming mechanism are given and its operation is described. Control and checking are exerted from the main panel of the photographic zenith telescope which is located in the observatory building, 110 m from the pavillion. There are 5 references.

Yu. Belyayev

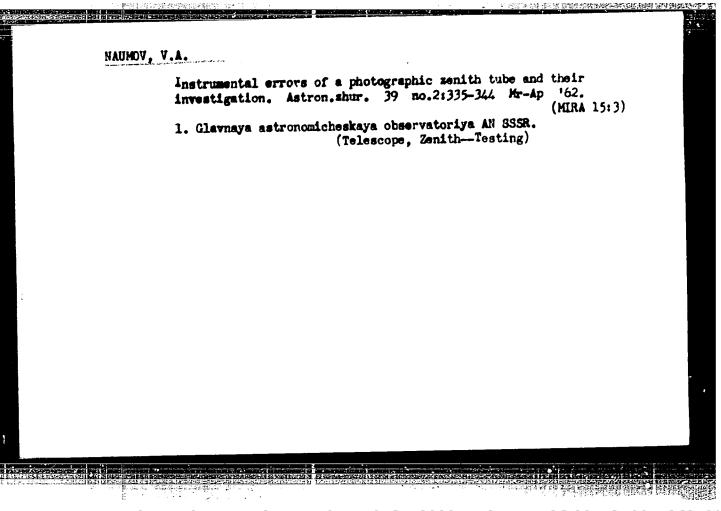
[Abstracter's note: Complete translation]

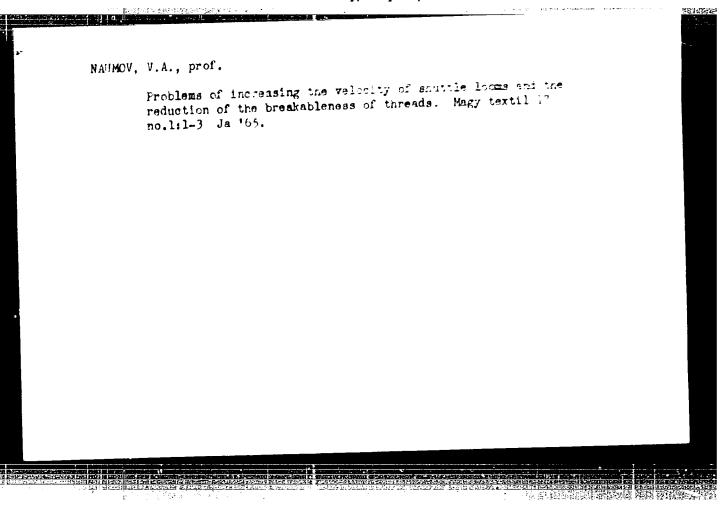
Card 2/2

NAUMOV, V.A.

Determining time and latitude with Pulkovo photographic senity tube. Astron.tsir. no.232:13 (D 162. (MIRA 16:4)

1. Glawnaya astronomicheskaya observatoriya AN SSSR. (Astronomy, Spherical and pratical)





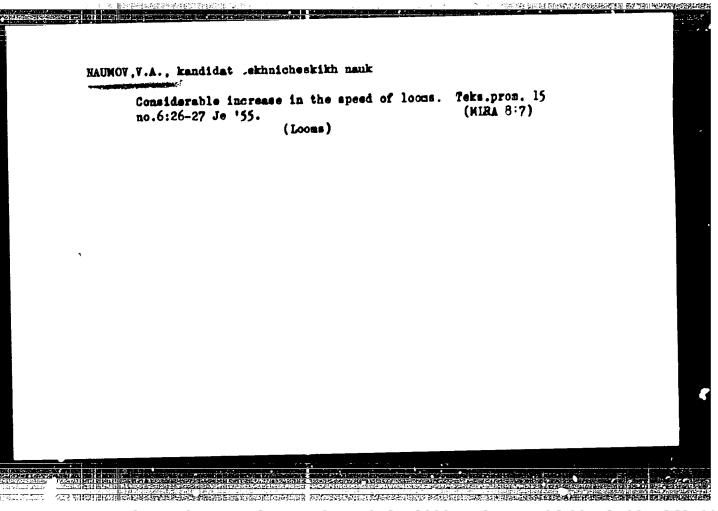
The repair of the jew-forming and working mechanism of a loom Noskva, Gos, nauchaotekhn. 12d-vo legket primyahl., 1950. 34 p. (Ministerstvo legket promyahlermosti SSSR. Telhatcheckne upravlenie. Otdel telhatcheckne legket Chmen rereiovym opytom) (51-27092)

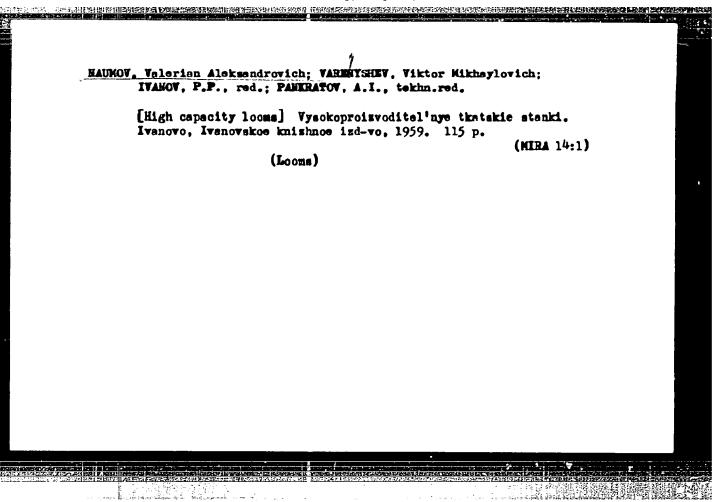
TS1493.N3

NAUMOV, V. A.

Flight of the shuttle on the loom. Moskva, Gos. nauchno-tekhn. izd-vo Ministerstva promyshl. tova-rov shirokogo patreblenila 3752, 1954. 192 p. (55-44184)

T31493.N33





NAUNOY. V.A., kand. tekhn. nauk; MEN'SHIKOYA, M.D., starshiy nauchnyy sotrudnik

Fabrics made of a mixture of capronfibers with cotton. Tekst. pros. 19 no.9:35-38 S '59. (MIRA 12:12)

1. Rukovoditel' tkatskoy laboratorii Ivanovskogo nauchno-iesledovatel'skogo instituta tekstil'noy promyshlennosti (IvNITI) (for Naunov) (Textile fabrics)

Waing the method of rounds of loom inspection for the study of thread breakage in weaving. Tekst.prom. 21 no.3:9-12 %r '61. (MRA 14:3)

1. Rukowoditel' tkatskoy laboratorii Ivanovskogo nauchno-isəledovatel'skogo tekstil'nogo instituta. (Weaving)

NAUMOV, V.A.; SKACHKOV, V.A., starshiy nauchnyy sotrudnik; TYULYALIN, V.G., starshiy nauchnyy sotrudnik

Causes of warp breakage on looms. Tekst. prom. 24 no.9:24-28 S '64. (MIRA 17:11)

1. Rukovoditel' tkatskoy laboratorii Ivanovskogo nauchnoissledovatel'skogo instituta (for Naumov). 2. Ivanovskiy nauchno-issledovatel'skiy institut (for Skachkov, Tyulyalin).

"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R001136210

USSR/ Chemistry - Structure of molecules Pub. 147 - 18/35 Card 1/1 Akishin, P. A.; Spiridonov, V. P.; Naumov, V. A.; and Rambidi, N. G. Authors Electronographic investigation of molecular structures. Part 3. Cadmium Title halidos * Zhur. fiz. khim. 30/1, 155-160, Jan 1956 Periodical The geometrical parameters of molecules of all cadmium halides were estab-Abstract lished through electronographic investigation. The molecules investigated were found to have a linear configuration. It was observed that the space Cd - F does not correspond with the experimental law governing the linear changes in the interatomic metal-halide spaces in many halogen derivatives depending upon the atomic number of the given halide. Thirteen references: 4 USSR, 3 Germ., 5 USA and 1 Indian (1889-1955). Tables; graphs. Moscow State University im. M. V. Lemonozov Institution : : May 26, 1955 Submitted

AKISHIN, P.A.; SPIRIDONOV, V.P.; HAUMOV, V.A.

Electron diffraction study of the structure of the ZnJ2 molecule.
Zhur.fis.khin. 30 no.4:951-953 Apr. *56. (NLRA 9:9)

1. Noskovakiy gosudarstvennyy universitet ineni N.V. Lomonosova. (Zinc Fluoride)

"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R001136210

-Umno Va USSR!/Physical Chemistry - Molecule, Chemical Bond.

B-4

Abs Jour: Referat. Zhurnal Khimiya, No 3, 1958, 6900.

Author : V - P.A. Akishin, V.P. Spiridonov, G.A. Sobolev, V.A. Naumov;

VI - P.A. Akishin, V.P. Spiridonov, G.A. Sobolev.

Inst

: Electronographic Investigation of Molecular Structure. V. Title

Magnium Halides. VI. Calcium Halides.

Orig Pub: Zh. fiz. khimii, 1957, 31, No 2, 461-466; No 3, 648-652.

Abstract: V. The structure of MgF₂ (I), MgCl₂ (II) and MgBr₂ (III) in gaseous state was investigated by the electron diffraction method. Peaks of 1.78 and 3.52 A referred to the distances Mg - F and F - F correspondingly were revealed on the curve of radial distribution for I; 2.18 (Mg - C1) and 4.36 (C1 - C1) were revealed for II, and 2.34 (Mg - Pr) and 4.36 (Br - Br) were revealed for III. In all these cases the best agreement between the theoretical and visual intensity curves (with the

Card : 1/2

moscow State Univ.

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R001136210(

USAR/Physical Chemistry - Molecule, Chemical Bond.

B-4

Abs Jour: Referat. Zhurnal Khimiya, No 3, 1958, 6900.

adjustment for the temperature) is observed at the angle X-Mg-X (where X is either F, or, Cl, or Br) = 180° . It was finally found (the first number is Mg-X in A, the second is the angle X-Mg-X): I-1.77 + 0.02, 180° + 30° ; II-2.18 + 0.02, 180° + 10° ; III-2.34 + 0.03, 180° + 10° .

VI. The electronographic investigation of CaP_2 (IV), $CaCl_2$ (V), $CaBr_2$ (VI) and CaI_2 (VII) in gaseous state was carried out similarly to the above. The following data were obtained (the first figure is Ca - X in A, the second figure is the angle X-Ca-X): IV - 2.10 + 0.03, 180° ; V - 2.51 + 0.03, 180° + 30° ; VI - 2.67 + 0.03, 180° + 10° , and VII - 2.88 + 0.03, 180° + 10° . See report IV in RZhKhim, 1956, 70926.

Card : 2/2

-6-

AKISHIN, P.A.; SPIRIDONOV, V.P.; SOBOLEV, G.A.; HAUMOV, V.A.

Studying the structure of molecules by means of electron diffraction. Fart 7: Strontium halides [with summary in English]. Zhur.fis.khim.31 no.8:1871-1874 Ag '57. (MIRA 10:12)

1. Moskovskiy gosudarstvennyy universistet im. M.V. Lomonosova. (Electron diffraction examination) (Stereochemistry) (Strontium compounds)

MARKEY, V. A.: Master Chem Sei (diss) -- "Electronographic investigation of the structure of the molecules of the halides of gallium, yttrium, lanthamum, and needymium". Mosear, 1958. 15 pp (Moseaw State W im M. V. Lemenesev, Chem Faculty), 110 copies (KL, Nr. 7, 1959, 197)

SOV 156 -59-2-1/48

AUTHORS:

Akishin, P A , Naumov, V A Tatevskiy, V M

TITLE:

Electron-Diffraction-Investigations of the Molecular Structure of Gallium-Halides (Elektronograficheskoye issledovaniye

stroyeniya molekul galogenidov galliya)

PERIODICAL:

Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya

tekhnologiya,1958. Nr 2, pp 205-209 (USSR)

ABSTRACT:

The task of the present paper is the determination of the configuration and of the geometrical parameters of the molecules of the gallium-fluoride, chloride, and bromide by the

of the gallium-fluoride, chloride, and bloads of diffraction-method with fast electrons, with a vapor-jet of the substance to be investigated. Because no data have been found so far in this field (except Ref. 1) the authors planned to apply a thoroughly worked-out experimental method as well as a deciphering method. For this reason a new type of electron-diffraction camera was employed (Ref. 2) and the ampulla was filled in a drying room. The elaboration of a vapor-electron-diffraction-pattern was carried out visually and photometrically (Ref. 3). The process of decoding was carried out by means of: a) construction of curves of the radial distri-

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APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R001136210(

SOV 156 -58-2-1/48

Electron-Diffraction-Investigations of the Molecular Structure of Gallium-Halides

bution (Ref 4) and b) the method of successive approximation (Ref 5). These investigations disclosed a new insight into the molecular structure of gallium-halides. The electrondiffraction-method proved the presence of monomer.molecules in vapor Moreover the configuration was determined as well as the geometrical parameter of the CaF, -molecule The di-merisation of molecules was proved in vaporous gallium-chlorides and gallium-bromides, and more reliable data were obtained from their structure and their geometrical parameters (see table 2) There exist good reasons to assume analogy between structure of the crystalline gallium-halides and aluminium-halides. Data on the configuration of gas molecules of Ga2Cl6 and Ga2Br6 agree with data of solid aluminium, gallium, and indium halides (Ref 9) as well as solid trimethyl-aluminium. There are 3 figures, 2 tables, and 9 references, 2 of which are Soviet

ASSOCIATION:

Kafedra fizicheskoy khimii Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Chair of Physical Chemistry of the State University imeni M V. Lomonosov Moscow)

Card 2/3

CIA-RDP86-00513R001136210(

APPROVED FOR RELEASE: Monday, July 31, 2000

SOV 156-58-2-1/48
Electron-Diffraction-Investigations of the Molecular Structure of Gallium-Halides
SUBMITTED: October 2', 1957

Card 3/3

CIA-RDP86-00513R001136210

AUTHORS:

MAUMEN, S. A

Akishin, P. A., Spiridonov, V. P.,

76-1-8/32

Sobolev, G. A., Naumov, V. A.

TITLE:

Studies of Molecular Structure by Electron Diffraction. VIII. Barium Halides (Elektronograficheskoye issledovaniye stroyeniya molekul. VIII. Galogenidy bariya).

PERIODICAL:

Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 1, μp . 56-61 (USSR)

ABSTRACT:

For the first time the hitherto in literature lacking data on the configuration and the geometric parameters of the molecules of all vaporous halides of barium are obtained. That is to say of barium fluoride, barium chloride and barium iodide. The taking of electronograms was carried out by means of an apparatus with an evaporator for high temperatures according to the method used by the authors of earlier works (ref. 1 to 6). The evaluation of electronograms was carried out according to two methods: the radial distribution according to the variant of Volter-Bich and that of consecutive approximations. With the evaluation according to the second method the authors established that the distribution of the

Card 1/3

intensity of stray electrons of the barium halide vapors, observed experimentally is well represented by the theoretical

Studies of Molecular Structure by Electron Diffraction. $76-1-\epsilon/32$ VIII. Barium Halides

intensity curves I(s) (which had been calculated on the condition of a linear configuration of the barium halide molecules). The asymmetry of the rings on the electronograms of barium halide vapors in less marked than with those of the corresponding halides of calcium and strontium (ref. 5.6). Because of the greater charge value of the barium nucleus compared with the charges of calcium- and strontium nuclei, the valence angle in the molecules of barium halides according to the method of consecutive approximation can be determined only less exact than with the molecules of halides of calcium and strontium .- In the case of ell compounds investigated a linear molecular structure was stated and the values of the intermolecular distances were found. The error in the determination of these distances Ba- X is ± 1 - 1,5 %. The authors stated that the interatomic distance Ba-X in chloride-, bromide- and iodide molecules changes approximatively according to the linear law in dependence on the ordinal number of the halide, while the distance Ba-F deviates strongly from this regularity.

Card 2/3

Studies of Molecular Structure by Electron Diffraction. 76-1-8/32 VIII. Barium Halides

There are 2 figures, 5 tables, and 7 references, 6 of which

are Slavic.

ASSOCIATION: Moscow State University imeni M. V. Lomonosov

(Moskovskiy gosudarstvennyy universitet im. M. V.

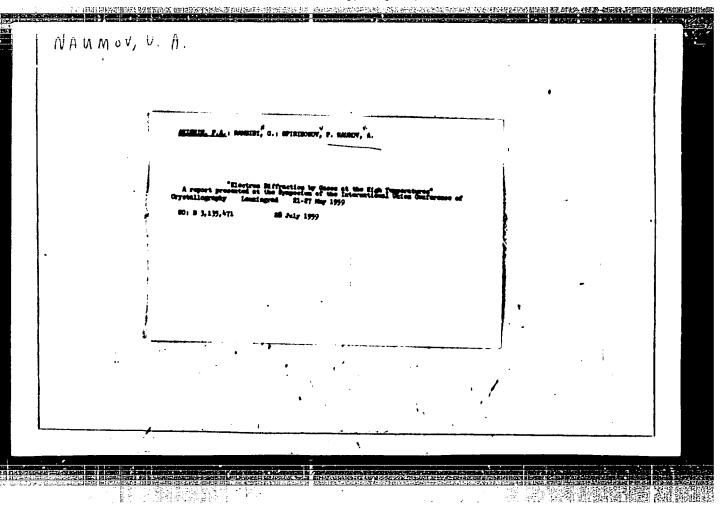
Lomonosova).

SUBMITTED: September 13, 1956

AVAILABLE: Library of Congress

Card 3/3

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R001136210



SCY/156-59-1-1/54

THE CONTRACTOR STREET,
WAUMOU, U.A.

5(2) AUTHORS:

Akishin, P. A., Naumov, V. A.

TITLE:

Electronographic Investigation of the Molecular Structure of Lanthanum Halides (Elektronograficheskoye issledovaniye

stroyeniya molekul galogenidov lantana)

PERIODICAL:

Nauchnyye doklady vysshey shkoly. Khimiya i khimic'eshaya

tekhnologiya, 1959, Nr 1, pp 5 - 7 (USSk)

ABSTRACT:

Five to seven series of electronograms were plotted from each lanthanum halide compound with and without the use of the s^2 sector at 40, 60, and 80 kv. The evaluation was carried out according to the methods of successive approximations and radial distribution. All curves of the radial distribution (see diagram) show two peaks. The first and higher one is interpreted as r(La-X), the second and flat one as r(X-X) (rinteratomic distance, X = F, Cl, Br, J). A flat triangular model of the compounds $LaX_{\frac{1}{2}}$ is formed by the curves of radial

distribution. The results are in good agreement with the data on yttrium halogen compounds. The interatomic distances La-X in the series of Cl. Br. and J compounds change according to

Card 1/2

APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R001136210(

Electronographic Investigation of the Molecular Structure SCV/156-59-1-1/54 of Lanthanum Halides

the atomic number of the halogen following a linear law (see diagram). The distance La-F does not follow this law, but shows a considerably reduced value. The results of the approximate computations for lanthanum fluoride, chloride, bromide, and iodide are summarized in a table. A second table shows the determined interatomic distances of the compounds mentioned. There are 2 figures, 2 tables, and 5 references, 1 of which is Soviet.

ASSOCIATION:

Kafedra fizicheskoy khimii Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Chair of Phy ical Chemistry of Moscou State University imeni M. V. Lomonosov)

SUBMITTED:

April 25, 1958

Card 2/2

24(7) 50V/156-59-2-1/48

AUTHORS: Akishin, P. A., Naumov, V. A., Tatevskiy, V. N.

TITLE: The Electronographical Investigation of the Structure of the Molecules of the Neodymium Halogen Compounds (Elektronografi-cheskoye issledovaniye stroyeniya molekul galogenidov neodima)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya

tekhnologiya, 1959, Nr 2, pp 229-232 (USSR)

ABSTRACT: In a previous investigation it was found (Ref 1) that the molecules of LaX, (X = halogen) have a plane configuration

with the lanthanum atom in the center of an equilateral triangle. Because of the similar structure of the outer electron
shells a similar configuration was to be expected in the case
of neodymium. The measurements carried out by means of an
electronograph of the Chemical Department of the MGU (Moskovskiy
gosudarstvennyy universitet - Moscow State University) confirm
this. The electronograms were read according to the method of
radial distribution and according to the method of successive
approximation. Figure 1 shows the curves of radial distribu-

tion. The two peaks of the curve are interpreted as r(Nd - X) and r(X - X). They were in agreement with the expected plane

Card 1/2 configuration. The RMS oscillation amplitudes were computed

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307/156-59-2-1/48 The Electronographical Investigation of the Structure of the Molecules of the Meodymium Halogen Compounds

> and the theoretical curves of the scattering intensity were plotted (Fig 2) which are in good agreement with the experimentally found curves. Table 2 shows the RMS oscillation amplitudes for NdF_3 , NdCl_3 , NdBr_3 and NdJ_3 and the geometrical parameter. The experimentally found symmetrical configuration of LaX, (Ref 1), YX, (Ref 7) and now also NdX, confirm the quantum chemical assumptions (Ref 8). In the series chlorine bromine - iodine, neodymium - halogen follow approximately a linear law, whereas the distance neodymium - fluorine is considerably reduced, as it is the case with a number of fluorine compounds. There are 2 figures, 2 tables, and 10 references, 5 of which are Soviet.

PRESENTED BY: Kafedra fizicheskoy khimii Moskovskogo gosudars:vennogo universiteta im, M. V. Lomonosova (Chair of Physical Chemistry, Moscow State University imeni M. V. Lomonosov)

SUBMITTED:

October 13, 1958

Card 2/2

THE STATE OF THE PROPERTY OF T

SOV/70-4-2-8/36 Akishin, P.A., Naumov, V.A. and Tatevskiy, V.M.

AUTHORS:

An Electronographic Investigation of the Structure of

Molecules of the Halides of Gallium and Yttrium

(Elektronograficheskoye issledovaniye stroyeniya molekul

galogenidov galliya i ittriya)

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 2, pp 194-200 (USSR)

Investigations were made, as in the previous paper, ABSTRACT:

using the sector-photometric method and the new electrono-

graph at the MGU. The results were analysed by successive approximations and the method of radial

distributions. Theoretical and experimental distribution

curves are reproduced. Ga2C16 and Ga2Br6 were dimeric

with Ga-Ga distances of 3.28 and 3.41 Å, respectively, and angles X_3 -Ga₂- X_{l_1} of 112° + 3 and 110° + 3 and

 $Ga_1-X_5-Ga_2$ of $91^{\circ}\pm 3$ and $93^{\circ}\pm 3$. All other distances are

tabulated. The other compounds GaF3, GaI3, YF3, YC13,

YBr3 and YI3 were plane triangular molecules with Me-X

Card1/2

TITLE:

An Electronographic Investigation of the Structure of Molecules of the Halides of Gallium and Yttrium

distances of 1.88, 2.44, 2.04, 2.47, 2.63, 2.80 ± 0.03 Å, respectively. These observations contradict some by Brode (Ref 3). Ga₂F₆ molecules were present (as shown by mass spectrometry) to an extent of <1% and Ga₂I₆ molecules were present to about 8% in GaI₃ at the m.p. which are 5 figures, 3 tables and 13 references, 3 of

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova (Moscow State University imeni M.V. Lomonosov)

SUBMITTED: July 15, 1958

Card 2/2

AKISHIN, P.A.; NAUHOV, V.A.; TATEVSKIY, V.M.

Electron diffraction investigation of the structure of molecules of vaporous gallium, yttrium, lanthanum, and neodymium halides.

Vest.Mosk.un.Ser.mat., mekh., astron., fis., khim. 14 no.1:
229-236 159. (MIRA 13:8)

1. Kafedra fizicheskoy khimii Moskovskogo universiteta. (Halides)

AKISHIN, P.A.; NAUMOV, V.A.

Electron diffraction study of the structure of the ScF3 molecule in vapors and evaluation of the scandium - halogen interatomic distances in ScCl3, and ScI3 molecules. Zhur. strukt. khim. 2 no. 1:3-6 Ja-F 161. (MIRA 14:2)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Scandium halides)

BALANDIN, A.A.; TOLSTOPYATOVA, A.A.; MAUHOY, V.A.

Determination of bond energies of the reacting atoms of organic molecules with the MoO₂ catalyst surface using a kinetic method.

IEV.AN SSSR.Otd.khim.nauk no.7:1150-1154 Jl *62. (MIRA 15:7)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.

(Chemical bonds) (Molybdenum oxide) (Chemical reaction, Rate of)

\$/192/62/003/005/003/003 D267/D308

WITHOR:

. Maumov, V.A.

TITLE:

X-ray diffraction investigation of scandium, yttrium, cerium, neodymium and gadolinium orthovanadates

PERIODICAL:

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Zhurnal strukturnoy khimii, v. 3, no. 5, 1962, 608-

611

This research was carried out to obtain more accurate values of the cell parameters of these orthovanadates, which, according to Milligan et al. (J. phys. coll. Chem., v. 53, 1949, gonal system and have the space group D4h crystallize in the tetraunits in the elementary cell. The specimens were obtained by sintering V₂0₅ with the metal oxides (in the case of Ce, heating to 350°C was used instead of sintering). No lines attributable to the reactants used could be detected. The tabulated results provide the following information: hkl, I, d (in kX), $1/d^2$ (both measured and calculated). The obtained data coincide within \pm 0.01 - 0.03 R with Card 1/2

S/192/62/003/005/003/003 D267/D308

(X-ray diffraction ...

those of Milligan et al. There are 2 figures and 6 tables.

ASSOCIATION:

Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza, Lisichanskiy filial (State organicheskogo sinteza, Planning Institute of Nitro-Scientific Research and Planning Institute of Nitro-gen Industry and of the Organic Synthesis Products, Lisichansk Branch)

SUBMITTED:

February 15, 1962

Card 2/2

33234

5/089/62/012/002/005/013 B102/B138

24. 2240

Broder, D. L., Kondrashov, A. P., Kutuzov, A. A., Naumov, AUTHORS:

V. A., Sergeyev, Yu. A., Turusov, A. V.

TITLE:

Multigroup methods of calculating biological shielding

PERIODICAL: Atomnaya energiya, v. 12, no. 2, 1962, 129 - 139

TEXT: The spatial energy distribution for biological shields is calculated for a source at a distance of 40 cm. Seven- and ten-group methods are used and the calculations are made in diffusion-age and diffusion approximations, respectively. As the lower limits of the groups the following energies were chosen for the seven-group method:

1.5·10⁶, 9·10⁶, 4·5·10⁵, 3·10³, 3.3, E_{lim} and 0 ev, and for the ten-group X method: 4·10⁶, 2.5·10⁶, 1.5·10⁶, 7·10⁵, 3·10⁵, 4·10⁴, 1·10³, 6.7, E_{lim}

and 0 ev. Spectrum and group constants are calculated for both groups and the results are compared graphically with experimental ones. The experiments were made with the critical assembly of a water moderated

Card 1/3

33234 \$/089/62/012/002/005/013 B102/B138

Multigroup methods of calculating...

reactor with a water side reflector. The shield investigated formed the bottom reflector. Three types of shields were investigated, consisting of several layers of various kinds of steel, lead, boron carbide and polyethylene. The neutron flux in the assembly was measured with a copper foil, the thermal-neutron flux in the core with a copper indicator and an U^{235} fission chamber, and, in the experimental assemblies, with ucopper indicator in a Cd container. Comparison between theoretical and experimental results permits the following conclusions: 1) Both the multigroup methods, and the group-constants chosen, are suitable for calculating the spatial distribution of neutron energy in shields containing Fe, Pb and H. 2) For shielding systems containing B the agreement with experiment is within 20% error limits. 3) The seven-group method can also be used to determine the spatial distribution of fast neutrons which is characteristic of delayed-neutron flux distribution For a source emitting 4-Mev neutrons and with large shield thicknesses, the ten-group results differ from the experimental ones by not more than 30%. N. A. Gushchina, L. V. Marchenko, Z. P. Sokolova, Z. S. Blistanova and A. M. Astakhova took part in the calculations, N. A. Alesnin and R Card 2/3

33234

Multigroup methods of calculating...

S/089/62/012/002/005/013 B102/B138

G. Bulycheva in the experiments. The reactor team members I. G. Morozov, Ye. I. Inyutin, V. K. Labuzov and N. G. Uvarov are thanked for their work. There are 4 figures, 1 table, and 12 references: 7 Soviet and 5 non-Soviet. The reference to the English-language publication reads as follows: D Hughes, L. Harvey. Neutron cross section, 1958.

SUBMITTED: April 17, 1961

Card 3/3

8/020/62/145/005/015/020 8106/8144

AUTHORS :

15 9300

Taytel baum, B. Ya., Gubanov, E. F., and Naumov, V. A.

TITLE:

Crystallization of natural rubber

PERIODICAL: Akademiya nauk SSGR. Doklady, v. 145, no. 5, 1962, 1077-1080

TEXT: The crystallization in natural rubber was studied by thermomechanical and X-ray diffraction analyses. In the range from -80 to 60°C and under alternating loads of 0.64 and 3.2 kg/cm, a sharp increase of deformability occurs at 0°C, due to funion of the crystallites. From -35 to 0°C, the deformability is smaller owing to an additional crystallization and solidification of rubber near optimum crystallization temperature (-25°C). When rubber is cooled from room temperature to below vitrification temperature within 1 hr, prectically no crystallites are formed except at the optimum crystallization temperature, since crystallization takes longer at other temperatures; it can be completely prevented by quickly freezing the rubber with liquid nitrogen. The melting point of the crystallites depends on their temperature of formation. In "tanned" rubber melting at ~45°C, the deformability in the highly elastic state is much lower than in rubbers Card 1/3

S/020/62/145/005/015/020 B106/B144

Crystallization of natural rubber

crystallizing at low temperatures, but rises suddenly at 45 - 48°C. Heating the "tanned" rubber to >50°C destroys the crystallinity. Such sumples do not show any jump in the deformability at 0° or 45°C, but their deformability on transition to the highly elastic state (-60°C) is much higher than in the initial rubber. When a rubber heated previously to 53°C is kept at -25°C for 1.5 hrs, crystallites are formed which melt at 0°C. When "tanned" rubber is being cooled to low temperatures, crystallization occurs without the temperature needing to be kept constant for long The crystalline phase, formed at room temperature, therefore initiates orystallization at low temperatures. X-ray analyses showed that the crystalline phases formed at different temperatures were independent of their melting points. This is explained by the fact that at -25°C the crystallites are formed so quickly that no equilibrium is attained. The low melting point may be due to strong internal stresses and/or to the small size of quickly formed crystallites. The results of the thermomechantcal and the X-ray analyses are complementary and this combination may be useful for studios of other polymers also. There are 4 figures. The most important English-language references are: C. W. Bunn, Proc. Roy. 500., A, 180, 40 (1942); D. H. Fischer, Proc. Phys. Soc., 60, 99 (1948). Cord 2/3

Grystallization of natural rubber

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